

# Automating Ship Reporting

## Progress Report



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# Presentation Topics

1. Background
2. IMO FAL
3. National Single Window
4. Current Automated Reporting Tools
5. Library of required ship reports
6. Ship Reporting Database
7. Prototype Ship Reporting Tool
8. Test Bed
9. Maritime Cloud

# Background

1. **Gap Analysis**

2. **Strategic Implementation Plan (SIP)**

3. **Proritized Solution 2**

Means for Standardized and Automated Reporting

4. **MSP8**

Vessel Shore Reporting Service (VSRS)

IALA VSRS Guideline in progress

# Ship Reporting Requirements

## 1. IMO FAL Forms

- Lack of Authority to limit Reporting Requirements

## 2. Many Other Reports are required

- beyond FAL Forms

# National Single Window

1. Based on IMO FAL Forms
2. Lack of Harmonization between Countries
3. No reduction of amount of information
4. Beneficial for Shore-based Authorities
5. Limited benefits for Mariners

**CUSTOMS AND EXCISE SERVICE**

香港海關

**Arrival Declaration**

船舶抵達申報表

Name of Vessel 船名 HANJIN TAMPA Call Sign 船隻呼號 AB23436  
 Voyage No. 航行次數 23212332 Buoy No. 泡位 435435  
 Arrival 到港 時間 Tokyo port hrs. on 日期 5/20/2015 12:00:00 AM

**(1) Shipping Particulars 船舶資料**

Name of Owner Delphi Navigation Ltd.  
 船東姓名  
 Nationality KOREA Port of Registry Busan  
 國籍 註冊港口  
 Tonnage-Gross 16,252 Registered Length 20007  
 噸位 毛重 註冊長度  
 -Net 45,350 Passenger Capacity 200  
 淨重 載客位  
 Year Constructed 2,015  
 建造年分  
 Name of Agent John  
 代理名稱  
 Address Busan, South korea  
 地址  
 Tel No. +98 3424325  
 電話

**(2) Voyage Itinerary 航程表**

<i>Name of Port</i> 所經埠	<i>Arrival</i> 到達日期	<i>Departure</i> 離開日期
busan , port	10/1/2015 9:25:21 PM	9/14/2015 9:25:21 PM
Tokyo , japan	10/7/2015 9:25:21 PM	10/3/2015 9:25:21 PM
LOS ANGES, U.S.A	10/23/2015 5:13:29 PM	10/31/2015 5:13:29 PM
LOS ANGES, U.S.A	10/23/2015 5:13:29 PM	10/31/2015 5:13:29 PM

Document	Distribution (copies)						
	LA	IM	CH	QI	AP	HM	Total
1. General Declaration	-	1	1	1	1	1	5
2. Cargo Declaration	-	-	1	1	1	1	4
3. Ship's Stores Declaration	-	-	1	1	1	-	3
4. Crew's Effects Declaration	-	1	1	-	-	-	2
5. Crew List	1	2	1	1	1	1	7
6. Passenger List	-	2	1	1	1	1	6
7. Maritime Declaration of Health	-	-	-	1	-	-	1
8. Last Port Clearance	-	-	-	-	-	1	1
9. Ship's particulars	1	-	-	-	-	1	2
10. Crew's passports	-	All	-	-	-	-	All
11. Chinese Tonnage Dues Certificate	-	-	1	-	-	-	1
12. Cargo Manifest	1	-	2	-	-	-	3
13. Bills of Lading	1	-	-	-	-	-	1
14. Stowage Plan	1	-	-	-	-	-	1

LA = local agent

IM = Immigration office

CH= Customs House

QI = Quarantine Inspection office

AP = Animal and Plant Inspection office

HM = Harbour Master

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9. Ship's particulars	1	-	-	-	-	1	2
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11. Chinese Tonnage Dues Certificate	-	-	1	-	-	-	1
12. Cargo Manifest	1	-	2	-	-	-	3
13. Bills of Lading	1	-	-	-	-	-	1
14. Stowage Plan	1	-	-	-	-	-	1

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# Current Automated Reporting Tools

1. DNV.GL Port Navigator
2. BASSnet Port Forms Management Module
3. Shipping Lines' "Home Grown" Solutions
4. <10% of Ships use Automated Reporting Tools
5. Goal: 100%
6. Reduce Cost of Automated Reporting Tools

# Library of Required Ship Reports

1. About 1000 Unique Reports
2. Unique Characteristics
3. Weekly Updates
4. Expensive to Create and Maintain
5. Library Costs are shared between few ships
6. Reduce cost per ship
7. Use Common Library of Ship Reports

# **Library of Required Ship Reports (cont'd)**

## **8. Draft IALA Guideline for Vessel Shore Reporting**

- Includes structure of Common Ship Report Library

## **9. Why is IALA involved?**

**Shore-based Authorities require ship reports**

**They are represented by IALA National Members**

- **Maritime Administrations**
- **Port Authorities**
- **VTS**

# **Library of Required Ship Reports (cont'd)**

## **Ship Report (Template) Attributes**

- 1. Maritime Resource Number (MRN)**
- 2. Report Type**
- 3. Ship Types required to submit Report**
- 4. Submission Criteria (To Whom?, When?, How?)**
- 5. Allowable Report Formats (Printed, PDF, XML, etc.)**
- 6. Form Layout (Header, Footer, Body)**
- 7. Fields / Attributes**

# **Library of Required Ship Reports (cont'd)**

**Maritime Resource Name**

**urn:mrn:iala:sr:igr:cc:st:pvt:bth:12345:vsn**

# Library of Required Ship Reports (cont'd)

## 19 Ship Report Types

Arrival/General Declaration

Ballast Water Log

Cargo Declaration

Disembarkation Certificate

Ship Certificate

Crew Effect Declaration

Crew Vaccination Record

Crew List

Foreign Currency List

General/NIL List

Health

Passenger List

Port of Call List (Voyage Memo)

Security Report

Ship's Particulars

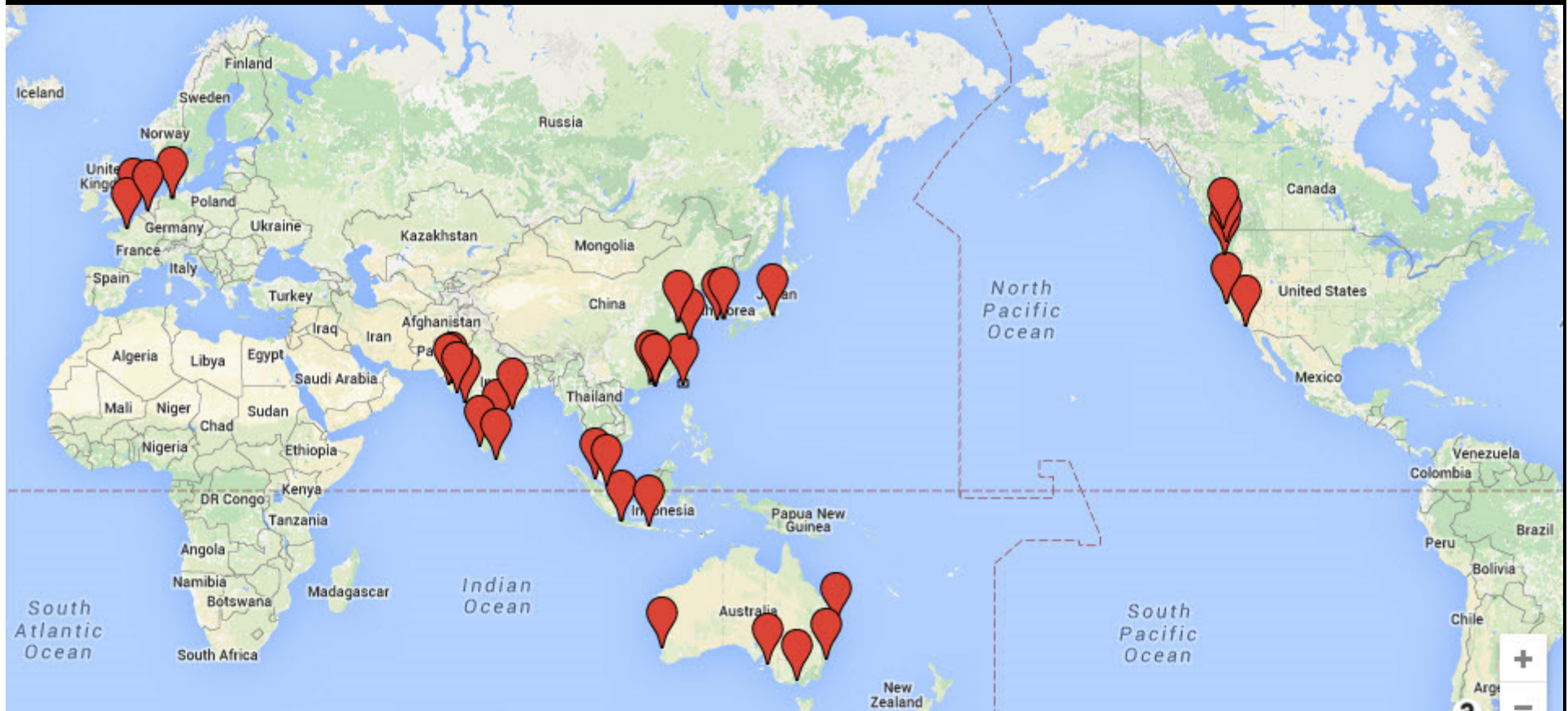
Ships Repairs

Ship Stores Declaration

Tank Condition

Waste Notification

# Library of Required Ship Reports (cont'd)



# Ship Report Database

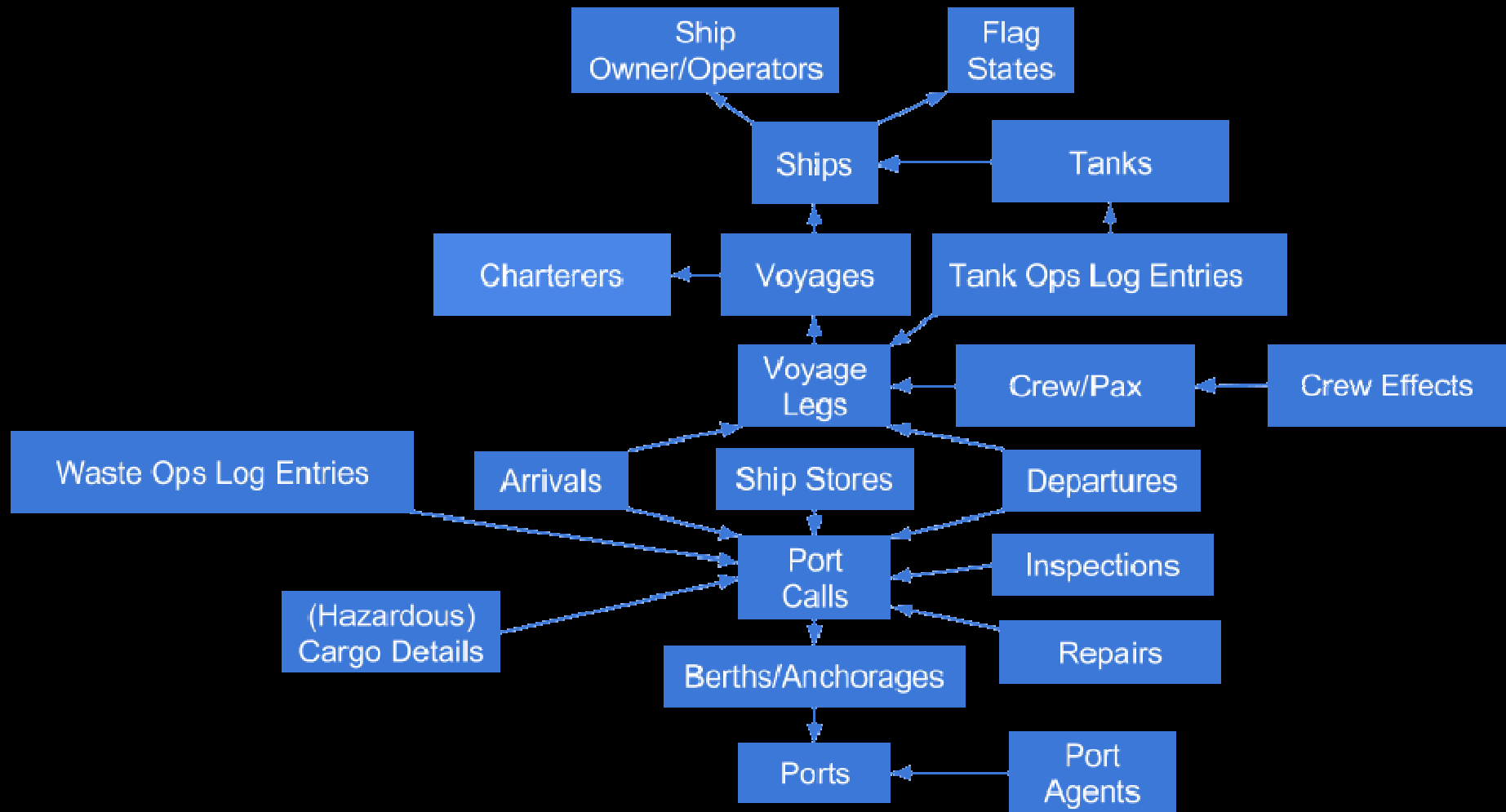
1. Contains all Ship Reporting Information
2. Manually entered or retrieved from other systems
3. Hosted On-Board
4. May be replicated to the Cloud to allow collaboration with Shore-based Personnel
5. Cloud version will need better Security
6. Collaboration requires Harmonization
7. Harmonization will also reduce the cost of Automatic Ship Reporting tools



# **Ship Report Database (Cont'd)**

- 1. Draft IALA Guideline includes S-2XX Specification**

# CMDS v1.1 Entity Relationship Diagram



# Ship Report Database (Cont'd)

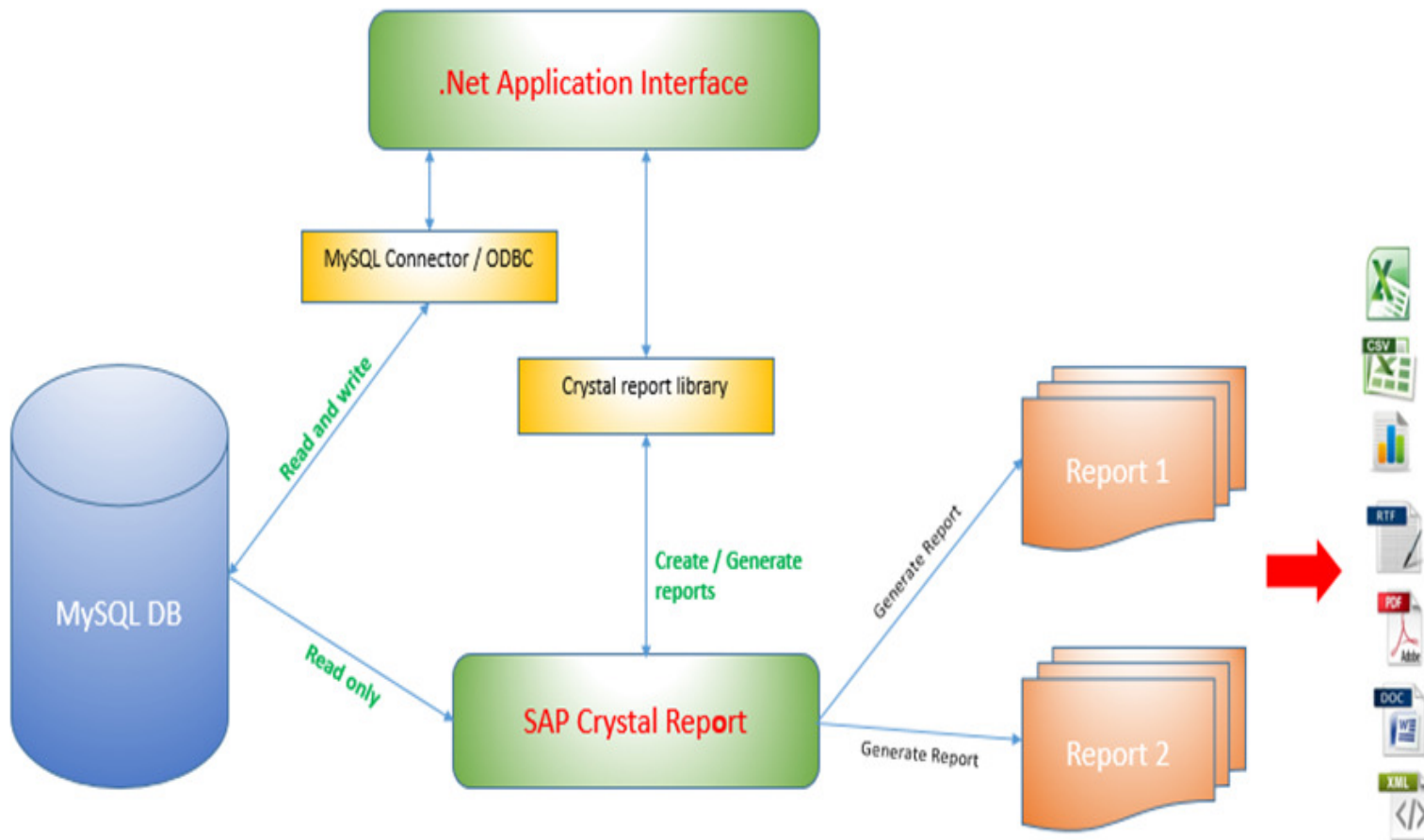
1. Harmonized with ISO 28005
2. Cloud-based version = part of CMDS
3. Can generate all Ship Reports for 32 Ports
4. Represents an “International Single Window”

# Ship Report Database (Cont'd)

## Governance of Cloud-Based Ship Report Database (part of CMDS)

1. Ship Owners/Operators own its content
2. They should control Database access
3. Who should administrate & manage the Database?
  - An existing Association (ICS, Bimco, InterTanko, etc.)
  - A new entity
  - LRIT Data Centers
  - 3<sup>rd</sup> Party on behalf of Ship Owners/Operators

# Prototype Ship Reporting Tool



# Prototype Ship Reporting Tool (Cont'd)

1. Can generate all Container Ship Clearance Reports for 32 Ports
2. Adheres to draft IALA VSRS Guideline
  - Ship Report Library
  - Ship Report Database
3. Designed to run standalone on a ship
  - Uses existing Telecommunications Infrastructure
  - No Cloud-based components

# Automatic Ship Reporting Testbed

## Inviting Container Ship Operators to test the prototype

- On one or more ships
- Calling on one or more of the 32 currently covered ports

## Inviting Shore-based Authorities of one or more of the currently covered ports to evaluate reports

- Adherence to reporting requirements

## Provide Feedback on

- Prototype
- IALA VSRS Guideline

# Maritime Cloud

After the IALA VSRS Guideline has been approved and Ship Reporting Database Governance has been assigned

- Industry can develop and market lower cost Ship Reporting Tools
- Use existing Telecommunications Infrastructure



# Maritime Cloud (Cont'd)

**MC Operational Testing is underway**

- **EfficienSea2 Project**

**When the MC becomes Operational**

- **On Ships**
- **In Ship Owners'/Operators' Offices**
- **For Port Agents**

**then Ship Owners/Operators will request industry to adapt Ship Reporting Tools to the MC to take advantage of the MC infrastructure**

# **Maritime Cloud (Cont'd)**

**The Draft IALA VSRS Guideline includes details on how Ship Reporting tools will likely need to be amended for the MC infrastructure**

**MC Security Tools have already been specified**

- **Authentication**
- **Authorization**
- **Encryption**

**These tools should be used for a cloud-based version of the Ship Reporting Database**

# Thank you!

## Questions?

**S-2XX Product Specifications**  
**VSRS Prototype**

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**Draft IALA VSRS Guideline**

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